

SUGAR AND PLANTATION NEWS

SECOND DAY'S SESSION OF SUGAR ENGINEERS

Ends With Visit To "Best Machine Shops West of Chicago"

PROGRAM FOR TODAY
9 a. m.—Third meeting of the Convention at the Library. Subjects to be discussed.

Rollers and Furnaces, 9 to 10:30 a. m.
Sugar Room Machinery, 10:30 to 12 m.
3 p. m.—Baseball game at McMillan Park between teams selected from the Hawaiian Engineering Association and the Hawaiian Chemist's Association. Admission free.

SECOND DAY'S SESSION

At the Sugar Mill Engineers convention yesterday morning the first report considered was that of the committee on milling.

Renton Hind said in opening the debate that the tendency in grooving seems to be to reduce the pitch, and depth of the grooves on the feed rollers and make those on the discharge rolls deeper and narrower. William Wyllie of Onomea said he is now making the grooves in the bagasse roll one-eighth inch wide and one and one-quarter inches deep. Using two sets of scrapers so as to clear the grooves he gets four per cent less water in the bagasse.

The Last Three Per Cent
In answer to a query as to whether reduction of moisture content was synonymous with greater extraction, R. S. Norris said he did not follow the argument made by J. P. Foster last week at the chemist's meeting, but believed that a final reduction of water content resulted in actual increase of sugar recovered. This increase apparently totals two-tenths to three-tenths percent where the water content is reduced three per cent when the total extraction runs around 97 or 98. He did not believe the losses in moisture due to the use of double scrapers. Renton Hind thought the value of double scrapers to that they eliminate trouble. The variety of cane has a lot to do with it. Mr. Wyllie said the greatest effect comes from using double scrapers on the last mill. The depth of groove is the controlling factor, he maintained. If single scrapers will stay in and do the work that is all that is necessary.

Groovers and Scrapers
J. Meinecke said that at Pounene the scrapers are habituated into the toe of the returner bar. The grooves are two inches apart and one inch deep. Joseph Wyllie of Pepeekeo thought that whether the roller is soft or hard has something to do with the need for double scrapers. As a matter of fact, he said, there is no use having the Menchert groove if the grooves are not kept clean. If they are kept clean there is no disturbance in the flow of the juice and no flooding back. Thomas Murray of Paauhau, said the scrapers in the first roll last a long time. In the bagasse roller grooves they have to be changed every four or five days.

Does It Pay?
Chairman Hind then directed attention to George Duncan's question, "Does it pay?" He said that his own mind is made up that it does pay even though grooving the rolls shortens their life very materially. Horace Johnson took the contrary view. "I am commencing to doubt," he said, "whether it is profitable to try for higher extractions now that we have reached 97 per cent. Theoretically it can be done, but I doubt whether, practically, we can get more sugar in the bags unless clarification can be improved."

Passing on to the Hind-Renton groove and steel rollers, Louis Kenton said that a mill set which has been in use all one season shows very little wear. Practically the only evidence of wear was a slight rounding off at the top of the grooves. At the close of the session the bottom of the grooves were still black. No scrapers were used, that being the advantage claimed for the Hind-Renton invention.

Gun Metal Return Bars
In answer to Horace Johnson's question about the substitution of gun metal for steel bars Renton Hind said the reason for using a softer bar is that steel cuts steel. The gun metal bar works well if the hardened rough surface is left. If the bar is planed smooth it wears out too quickly. E. Kopke said that was the fault of the McKubbin bars. They were too soft. The bars ought to be hard rather than tough, he said.

The Paauhau double pinions were discussed by E. Kopke, T. Murray and W. G. Hall. Mr. Kopke went into the theory of so adjusting a roller that there should be no torsion but there is no way of testing it out. "We have the only index of the pressure on a pinion tooth," he said. The chief value of the double pinion is to take care of the shock when a shaft breaks. With this Mr. Hall agreed, saying that the double pinion might save a broken housing.

Straight-Away Carriers
The Ramsey Intermediate Carrier was declared to be behaving extremely well but needs to be raised about four inches. R. S. Norris spoke of the wearing of the toe of the Ramsey scraper. W. G. Hall said that defect has been recognized and the new model meets the criticism. He said also that Joseph Wyllie has changed the drive to the discharge end thereby greatly improving it.

The warning given by shafts before breaking was debated. Sometimes the journals get hot and again they don't. Discussion of the life of a leather in hydraulic ram cylinders brought out

the fact that the cylinder must be tried and reground.

The testing of shafts was debated. W. G. Hall and E. Kopke told what tests are used in machine shops and why. Electro magnets in front of the crusher have been tried out at Pahaia and discarded. "The cane is too thick, and brushes off any iron that the magnet catches," Mr. Wilson stated.

Swing Hammer Shredders
The five Searby shredder installations in Hawaii were described at length by W. G. Hall who showed photographs and sectional drawings. Renton Hind said that to give an idea of the work the shredder does, he had crawled into the one at Pounene and counted the hammers. There are six rows of eighty-four hammers each, or 504 in all. The shredder works at 1800 revolutions per minute, so the cane in that time receives 907,200 blows.

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SUGAR GOES BACK DURING SEPTEMBER

Department of Agriculture Figures Decline in Cane and Beet Prospects

The estimates of the department of agriculture for October 1 show record crops of wheat, oats, barley and hay, and a corn crop closely approaching the record. The returns to that department indicate a production of approximately three billion bushels of corn, one and a half billion bushels of oats, one billion bushels of wheat, and a hundred million tons of hay, if the twenty million estimated tons of—

—hay, a crop not heretofore reported upon, be included.

According to the reports received by the department, prospects improved during September for all these crops. The conditions during the month were generally favorable to the maturity of growing crops, to harvesting and to fall plowing. The proportion of warm and sunny days was higher than in prior months, though there were rather general storms toward its close.

Sugar Cane
The condition of sugar cane, which was poor, 74.4 per cent, on September 1, continued to decline during that month and on October 1 was estimated at 67.4 per cent, compared with an average of 85.6 per cent, being 65 per cent in Louisiana against 72 per cent last month and 87 per cent average. The hurricane of September 29, which swept the cane belt of Louisiana, did considerable apparent injury, but the best informed opinion is that the benefit of the heavy downpour of rain, and the better weather following the storm, will compensate for the damage and possibly more than offset the immediate loss to the crop.

Sugar Beets
Are estimated to have fallen off a fraction to 91 per cent of normal, very near the ten-year average. The crop is good in Michigan and adjoining States, except for some leaf spot and rot, good in Nebraska and Kansas, very good in Idaho and California, lowered by leaf spot in Colorado, and sugar content lowered by late rains starting new growth in Utah.

GOOD GROWING WEATHER
Good growing weather is reported from all the plantation districts. Oahu has had the least rain of all the islands the "valley showers" that have benefited Honolulu not having extended generally to the cane fields.

Kaui has had enough rain to fill all the reservoirs but the fields could stand more moisture. On Maui the ditches are running bank full with water to spare. Good growing rains are reported from Kauai and Kohala.

In the Kopke heater the velocity of the juices is one-twelfth that in the Deming.

How To Save Oil
Lubricants was the next subject discussed. Renton Hind told of having cut down the oil consumption at Ewa from thirteen gallons to 4.3 gallons per day, and J. Meinecke said he has cut the lubricating oil bill in half at Pahaia by installing forced feed instead of the old fashioned ones.

How to get mineral oil out of the evaporators was debated as caustic soda does not saponify it. Mr. Kopke said the best practice is to fill the evaporator full of distillate. Even if the distillate is thrown away the cost of a couple of drums is less than that of taking out the tubes to clean them.

R. S. Norris referred to the fact that at Pahaia the company had hired an oil expert who had made tests and had reduced mill lubrication to a scientific basis. Other plantations would gain by doing the same thing.

Various Invitations
An invitation from the trustees of the B. P. Bishop Estate was read asking the engineers to visit the Kanehameha School shops and chairman Hind suggested that the delegates look over the splendid equipment before returning home. A letter from Governor Pinkham thanked the engineers for their invitation to attend the banquet Thursday night where he was to have been the guest of honor. He regretted that his condition did not permit his acceptance of the invitation.

Paul Super, secretary of the Y. M. C. A. extended an invitation to the members to make use of the institution during their sojourn. Chairman Hind then announced that the Mikahala will not leave for Kauai until 10 o'clock Thursday night.

Visited Naval Station Shops
Through the courtesy of Rear Admiral Clifford J. Boush, commandant of the Naval Station, the engineers, some sixty strong, visited the great machine shops at Pearl Harbor yesterday afternoon. They left Honolulu by special train at 1:45 A. M. at Pearl Harbor they were received at the administration building by Lieut. Glen S. Burrill, representing the commandant, and were conducted through all the shops. Next they inspected the dry dock, coal plant and the fuel oil storage plant, returning to Honolulu at five o'clock. The U. S. Naval machine shops at Pearl Harbor are the finest west of Chicago.

Last night the engineers were the guests of C. B. Gage, manager of the Gregg Company at the concert at the Popular Theater.

They will meet for business again at this morning at the Library of Hawaii.

REFINED DEMAND GOVERNS PRICES

First New Crop Sales For January Delivery At Four Cent Level

General Tone Stronger Because Of Changing Sugar Crop Conditions Abroad

New York sales for the week ending October 14 were 293,000 bags Cuban and Porto Rican raws. Willett & Gray make a comparison of prices as of that date this year and a year ago showing raws one-half cent cheaper this year than last. Granulated was 4.802 this year and 4.88 in 1914, the difference between granulated and raws being 0.792 cents now and 1.37 cents last year.

Stock in the United States and Cuba together of 508,507 tons, against 532,838 tons last week and 467,855 tons last year, an increase of 38,652 tons from last year. Willett & Gray's report states, in part, that business thus far on the advance has been about moderate, and the market was generally well settled on any new basis until considerable further business is done. The coming week will show whether the advance can be maintained or whether lack of interest by buyers will return the market to its former declining tendency until a level is reached somewhere below 3c.45.

First January Sales
Some interest has been shown by speculators recently for new crop sugars, particularly for January shipment. Sales were made at 3.800 the advanced to 4.08 and declined to 4.01. Advice from England state that sales of new crop sugars have been made to that country to extent of 200-250,000 tons.

The visible Cuban production to end of September is 2,532,987 tons, or 2,560,335 tons. The receipts of the week are only 1,735 tons against 5,000 tons last year, although exports are 27,068 tons compared with 11,000 same week a year ago.

Cuba Stocks Heavy
Stocks of sugar heavily and stand at 236,394 tons, or more than double the figure of 1914, which was 112,000 tons. One central continues to work, and weather is reported as fair and unsettled, but all indications received from Cuba point to a record crop for 1915-16. Visible production to October 9 is 2,536,603 tons against 2,504,335 tons last year, or a decrease of 27,268 tons.

Japan Exports Heavier
Our Havana cable reports the September exports to Europe as 80,000 tons, which rather more than makes up for the July-August exports, which were shorter than anticipated. The total exports of the crop to Europe now stand at 230,000 tons.

It will no doubt, be recalled that the exports of Europe in August, 1914, were only 5,490 tons, but after the large purchases by the United Kingdom soon after the outbreak of hostilities, the September shipments made up the large total of 212,546 tons. The shipments to eastern countries amounted to 136,000 for the month of September, 1915. The whole crop this season is being shipped in record time, the total exports to September 30 being 745,000 tons, against 600,207 tons and 705,822 tons for the two previous years, respectively.

No More Rebates
The demand at 4.000 less 2 per cent somewhat improved the refined market. On Monday the refiners announced the discontinuance of the recent privileges of withdrawing contract sugars at the basis of the price on the day of shipment.

One refiner gave the following notice: "For all contracts entered on and after Monday, October 11, 1915, invoices will be rendered at the price stated in the contract irrespective of what the price may be on date of shipment or when sugars arrive at destination. For outstanding contracts, invoices will be rendered and deliveries made on the basis of prices prevailing at the opening of business Monday, October 11, 1915." All the other refiners issued a similar notice.

Domestic beet refined of Michigan and Ohio new crop manufacture was placed on the market on Monday at 4.65c per lb. (54c under cane refined) for distribution in what is known as the Central West territory, or west of Buffalo and Pittsburgh.

European Beet Crops
Abroad, F. O. Light reports that German factories will begin their campaign only eight or ten days later than usual. The bright sunbath fall weather has much improved crop prospects and yields. In Austria-Hungary the prospects are now for a good average sugar yield crop. The official Hungarian statement on the beet stand at September 13, reports the development of the beets as everywhere good. The leaves are luxuriant and the roots strong. Owing to the plentiful rain and lack of attention some harm has been done by weeds. For the ripening dry, warm weather is desired.

Advice from Russia state that in Kieff the sugar position shows no change of any note. Sugar circles have their attention mostly divided between the alleged manipulated scarcity on the inland market, with consequent exorbitant prices, and the probable effect of the continued extension of the area affected by military activity.

CONSUMPTION UP TO 86 POUNDS PER CAPITA

Commerce Bureau Estimates Show Increased Use of Sugar Since War

More than one-fifth of the 40,000,000, 000 pounds of sugar that represent the world's production last year was consumed in the United States. The consumption of sugar in the United States exclusive of its sugar producing islands during the fiscal year ending June 30, 1915, has been calculated by the bureau of foreign and domestic commerce, department of commerce, as 8,630,000, 000 pounds, or 86 pounds per capita.

Hawaii Crop Quarter of Cuban
Of the sugar consumed in this country in 1914-15, 1,941,000 pounds were produced on the mainland, 1,291, 000 pounds in Hawaii, 530,000 pounds in Porto Rico, 327,000 pounds in the Philippines, and the remainder in foreign countries. Cuba, the leading source of imported sugar, sent United States 4,783,000 pounds in the last fiscal year, that quantity being nearly four times as much as that from Hawaii and eight times as much as that from Porto Rico.

Beet sugar now leads cane sugar by nearly 1,000,000 pounds in the yearly domestic product, having reversed the conditions which obtained 20 years ago. In 1895, for example, according to the statistical abstract of the United States, the domestic sugar product totaled approximately 775,000 pounds, the share of beet sugar being only 45,000,000 pounds.

Beets to the Fore
In 1915 our sugar product had increased to 1,941,000 pounds, the share of beet having grown to 1,448, 000,000 and that of cane having decreased to 493,000,000 pounds. Mean time beet sugar has practically disappeared from United States imports.

Eighteen years ago when the Cuban supply of cane sugar was cut off by war, the United States imported nearly 2,000,000 pounds of beet sugar. After the return of peace in Cuba imports of beet sugar fell off sharply, and in the last fiscal year beet sugar imports amounted to less than 1,000,000 pounds.

The cutting off of the sugar supply of European countries has resulted in a remarkable expansion of sales of sugar to foreign countries. For the fiscal year 1915 they aggregated 582,000,000 pounds, compared with 22,500,000 pounds in 1900 and 40,500,000 pounds in 1880.

Changes in Economic Position
The following table presents the leading changes in the economic position of sugar in 1914-15 as compared with the preceding year:

	1913-14	1914-15
World's sugar product	42,053, 40,242	
U. S. cane sugar product	601, 493	
U. S. beet sugar product	1,467, 1,448	
U. S. imports: Cuban		